217/785-1705

CONSTRUCTION PERMIT – REVISED

PERMITTEE

Fairmount Minerals, LTD.
Attn: Mr. Robert Larson
3448 East 2153rd Road
Wedron, Illinois 60557

Application No.: 13090010 I.D. No.: 099804AAB
Applicant's Designation: TECHNISAND Date Received: April 25, 2014
Subject: Coating Process No. 2
Date Issued: August 8, 2014
Location: 3448 East 2153rd Road, Wedron, LaSalle County

Permit is hereby granted to the above designated Permittee to CONSTRUCT emission source(s) and/or air pollution control equipment consisting of a facility to produce coated sand, including the emission units in Table 1 and associated baghouse collector system (BH1-TW2), the emission units listed in Table 2 and associated cyclone collection system (CY1-TW2) and afterburner (optional), the emission units in Table 3 and associated baghouse collector system (BH2-TW2); the heater for the sand dryer (DR1-C); 6 storage tanks for coating (TKS); and 2 space heaters (SH1 & SH2); as described in the above referenced application. This Permit is subject to standard conditions attached hereto and the following special condition(s).

Section 1: Conditions for the Project

1.1. Introduction

a. This permit authorizes the construction of a facility that would produce coated sand (the affected facility). Coatings would be applied to sand in two mixers and the coated sand would then be dried in an indirectly heated fluidized bed dryer. The coatings would contain a mixture of water and a petroleum distillate. The dryer would be designed to operate as a closed loop system. A condenser would remove the water and petroleum distillate from the gas stream, which would then be recycled to the front of the dryer with only a small stream of purge gas normally venting from the dryer. The condensed material would be processed to remove water and the petroleum distillate would then either be sent off-site as a byproduct from the coating process or, if it would meet applicable legal requirements, used as a fuel in the separate heater for the dryer (See Condition 3.5(b)(ii)). The design of the dryer, with only a small purge stream going to the atmosphere, will act to control emissions of particulate matter (PM) and volatile organic material (VOM) from the coating process. In addition, the source may elect to voluntarily control the purge stream with an afterburner.

The facility would include equipment to transfer sand to the coating operation and equipment to handle coated sand from the

operation, including transfer equipment, screens, coolers, silos, a sand heater, rail and truck loadout spouts, and a bagger. PM emissions from transfer equipment for raw sand and finished product would be controlled by two baghouse control systems (BH1-TW2 and BH2-TW2, respectively). PM emissions from the coating units and associated process equipment are controlled by a cyclone system (CY1-TW2).

The dryer would be heated indirectly with a heat transfer fluid from a separate heater. This heater would be designed to fire natural gas and distillate oil, as well as petroleum distillate recovered in the dryer.

b. For purposes of this permit:

i. The new sand coating facility addressed by this permit is the “affected facility”.

ii. The various emission units in the affected facility are referred to as the “affected units”.

iii. The affected units other than the heater for the fluidized bed dryer and the space heaters are referred as the “affected process units”. Detailed requirements for these units are contained in Section 2 of this permit.

iv. The heater for the fluidized bed dryer is referred to as the “affected heater”. Detailed requirements for this unit are contained in Section 3 of this permit.

1.2. Good Air Pollution Control Practices

At all times the Permittee shall maintain and operate the affected units, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions.

1.3. Generally Applicable Emission Standards

Each affected unit is subject to 35 IAC 212.123(a), which provides that the emission of smoke or other particulate matter from an emission unit shall not have an opacity greater than 30 percent, 6-minute average, except as provided by 35 IAC 212.123(b) or Part 201 Subpart I.

1.4. Non-Applicability Provisions

a. This permit is issued based on the affected facility not being a major project for purposes of the federal rules for Prevention of Significant Deterioration of Air Quality (PSD), 40 CFR 52.21. This is because the facility will continue to not be a major source for emissions of regulated NSR pollutants other than

greenhouse gases (GHG) and the potential GHG emissions of the affected facility are not significant.

b. This permit is issued based on the affected facility not being a major source for emissions of hazardous air pollutants (HAPs), so that a case-by-case determination of Maximum Achievable Control Technology is not required for this project pursuant to Section 112(g) of the Clean Air Act. This is because the potential emissions of HAPs from the affected facility, when considered as a single "process of production unit" as defined by 40 CFR 63.41, are less than 10 tons/year of any individual HAP and 25 tons/year of total HAPs. This is a consequence of the various limits and requirements established for the facility by this permit, including limits for emission of PM and VOM.

1.5. Work Practice Requirements

The Permittee shall perform regular maintenance on the affected units, including associated control devices, in accordance with written procedures developed and maintained by the Permittee, which procedures may include the manufacturer(s) and/or vendor(s) recommendations.

1.6. Operational Limits

a. i. The amount of sand processed by the affected facility shall not exceed 96,360 tons per month and 963,600 tons per year.

ii. Compliance with the above annual limit and other annual limits in this permit shall be determined from a running total of 12 months of data.

b. i. The rated design heat input capacity of the affected space heaters, in total, shall not exceed 6 mmBtu/hour.

ii. The only fuels fired in the affected heating space heaters shall by natural gas.

1.7. Emissions

a. The particulate emissions of the affected facility and the individual affected units or groups of affected units in the facility shall not exceed the limits in Table 4.

b. i. The emissions of nitrogen oxides (NO_x), carbon monoxide (CO), sulfur dioxide (SO_2) and volatile organic material (VOM) from the affected heater and the space heaters at the affected facility shall not exceed the following limits.

Pollutant	Limit			
	Heater for Sand Dryer		Space Heaters (combined)	
	Pounds/Hour	Tons/Year	Pounds/Hour	Tons/Year
NOx	3.64	15.94	0.60	2.62
CO	2.35	10.30	0.50	2.20
SO_2	2.80	12.26	---	---
VOM	0.15	0.67	---	---

ii. The emission of greenhouse gases (GHG), as carbon dioxide equivalents (CO_2e), from the affected heater shall not exceed 2,300 tons/month and 23,000 tons/year.

c. i. The VOM emissions of the affected mixers and fluidized bed dryer, combined, shall not exceed 0.25 pounds/hour and 1.1 tons/year.

ii. This permit is issued based on negligible emissions of NO_x, CO, SO_2 and GHG from the affected mixers and fluidized bed dryer. For this purpose, emissions NO_x, CO and SO_2 shall each not exceed 0.44 tons/year. Emissions of GHG, as CO_2e, shall not exceed 200 tons/year.

d. This permit is issued based on minimal emissions of NO_x, CO and GHG from any afterburner as it would be used to control emissions of the affected fluidized bed dryer. For this purpose, the emissions attributable to use of an afterburner to control this dryer shall each not exceed 1.1 tons/year of NO_x, 1.1 tons/year of CO and 2,000 tons/year of GHG, as CO_2e.

e. This permit is issued based on negligible emissions of VOM, NO_x, CO, SO_2 and GHG from the affected units that are not addressed above in Condition 1.7(a), (b), (c) or (d). For this purpose, the emissions of VOM, NO_x, CO and SO_2 shall each not exceed 0.44 tons/year. The emissions of GHG, as CO_2e, shall not exceed 200 tons/year.

1.8. General Requirements for Performance Testing

For the performance tests required by Condition 2.4 and 3.6, the Permittee shall fulfill the following requirements:

a. At least 60 days prior to the actual date of testing, a written test plan shall be submitted to the Illinois EPA for review. This plan shall describe the specific procedures for testing, including as a minimum:

i. The person(s) who will be performing sampling and analysis and their experience with similar tests.

ii. The specific conditions under which testing will be performed, including a discussion of why these conditions

will be representative of maximum emissions and the means by which the operating parameters for the emission unit and any control equipment will be determined.

iii. The specific determinations of emissions and operation, which are intended to be made, including sampling and monitoring locations.

iv. The test method(s), which will be used, with the specific analysis method, if the method can be used with different analysis methods.

v. Any minor changes in standard methodology proposed to accommodate the specific circumstances of testing, with justification.

vi. The format and content of the Final Report for testing.

b. The Illinois EPA shall be notified prior to the testing to enable the Illinois EPA to observe the testing. Notification of the expected date of testing shall be submitted to a minimum of 30 days prior to the expected date. Notification of the actual date and expected time of testing shall be submitted a minimum of 5 working days prior to the actual date of testing. The Illinois EPA may, at its discretion, accept notification with shorter advance notice provided that the Illinois EPA will not accept such notifications if it interferes with the Illinois EPA's ability to observe testing.

c. Copies of the Final Report(s) for testing shall be expeditiously submitted to the Illinois EPA, in all case within 60 days after the date of the test. The Final Report shall include as a minimum:

i. A summary of results.

ii. General information.

iii. Description of test method(s), including description of sampling points, sampling train, analysis equipment, and test schedule.

iv. Detailed description of test conditions, including:

A. Process information, i.e., mode(s) of operation and process rates; and

B. Control equipment information, i.e., equipment condition and operating parameters during testing.

v. Data and calculations, including copies of all raw data sheets and records of laboratory analyses, sample calculations, and data on equipment calibration.

1.9. Recordkeeping Requirements

a. The Permittee shall maintain the following logs or other similar records for the affected units and associated control devices:

i. An operating log that at a minimum shall contain the following information the identification of each incident during which emission unit(s) operated without the associated control device or when the associated control devices was not operating properly, with detailed description, including duration, a discussion of the likely cause(s) of the event, the corrective actions that were taken, and any preventive measures that were be taken to reduce future incidents, and an estimate of excess emissions during the incident, if any.

ii. A maintenance and repair log that at a minimum describes all routine and non-routine maintenance and repair performed including dates and description.

b. The Permittee shall keep the following records related to the emissions of NO_x and CO from the affected space heaters:

i. A file containing calculations for the maximum hourly emission rates of NO_x and CO (lbs/hour and lbs/mmBtu), with supporting documentation; and either

ii. A demonstration that the annual emissions will not exceed the annual limits in Condition 1.7(b)(i); or

iii. Records of the monthly operating hours or monthly usage of fuel, which may be either directly determined or calculated from other relevant information, and records of actual emissions of NO_x and CO (tons/month and tons/year), with supporting calculations.

c. The Permittee shall keep records of the total emissions of PM, PM_{10}, NO_x, CO, VOM, SO_2 and GHG, as CO_2e, from the affected facility (tons/month and tons/year, for each pollutant), based on the records required by Condition 1.9(b)(ii) or (iii) and the records for emissions required by Sections 2 and 3 of this permit.

1.10. General Requirements for Records

a. All records and logs required by this permit shall be retained at a readily accessible location at the source for at least five years from the date of entry and shall be made available for

inspection and copying by the Illinois EPA or USEPA upon request. Any records retained in an electronic format (e.g., computer) shall be capable of being retrieved and printed on paper during normal source office hours so as to be able to respond to the Illinois EPA or USEPA request for records during the course of a source inspection.

1.11. General Requirement for Reporting

If there is a deviation from the requirements of this permit that is not otherwise address by compliance reporting pursuant to the federal New Source Performance Standards (NSPS) or National Emissions Standards for Hazardous Air Pollutants (NESHAP), the Permittee shall submit a report to the Illinois EPA within 30 days. The report shall include a description of the deviation, the probable cause of the deviation, the corrective actions that were taken, and measures taken to prevent similar occurrences in the future.

1.12. General Requirements for Reports and Notifications

Two copies of required reports and notifications shall be sent to the Illinois EPA, Division of Air Pollution Control, Compliance Section in Springfield; and

One copy of required reports and notifications shall be sent to the Illinois EPA, Air Regional office in Peoria; and

One copy of required submissions relating to performance testing shall be sent to the following address unless otherwise indicated:

Illinois Environmental Protection Agency
Division of Air Pollution Control
Source Monitoring Unit
9511 West Harrison
Des Plaines, Illinois 60016

1.13. Authorizations to Construct and Operate

a. The authorization to construct an afterburner for the dryer or to duct the dryer to an existing afterburner at the source will expire if construction on this control measure is not commenced within one year of initial startup of the fluidized bed dryer.

b. The Permittee is allowed to operate the affected facility under this permit until final action is taken on the CAAPP application for the source. This condition supersedes Standard Condition 6.

Section 2: Conditions for the Affected Process Emission Units

2.1. Applicable State Emission Standards for Affected Process Units

a. The emissions of particulate matter (PM) from the affected process units are subject to 35 IAC 212.123(a), which provides that no person shall cause or allow the emission of smoke or other particulate matter, with an opacity greater than 30 percent, into the atmosphere from any emission unit other than certain emission units subject to the requirements of 35 IAC 212.122, except as allowed by 35 IAC 212.123(b) and 212.124.

b. The emissions of organic material from the affected process units are subject to the following standards:

i. 35 IAC 215.301, which provides that no person shall cause or allow the discharge of more than 3.6 kg/hour (8 lbs/hour) of organic material into the atmosphere from any emission source, except as provided in 35 IAC 215.302, 215.303, 215.304 and the following exception: If no odor nuisance exists the limitation of 35 IAC 215 Subpart K shall apply only to photochemical reactive material as defined in 35 IAC 211.4690; or

ii. 35 IAC 215.302(a), which provides that emissions of organic material in excess of those permitted by 35 IAC 215.301 are allowable if such emissions are controlled by flame, thermal or catalytic incineration so as either to reduce such emissions to 10 ppm equivalent methane (molecular weight 16) or less, or to convert 85 percent of the hydrocarbons to carbon dioxide and water.

c. The emissions of SO_2 from the affected process units are subject to 35 IAC 214.301, which provides that no person shall cause or allow the emission of SO_2 into the atmosphere from any process emission unit to exceed 2000 ppm.

d. The emissions of particulate matter (PM) from the affected process units are subject to the following standards.

i. 35 IAC 212.301 and 212.314, which provide that no person shall cause or allow the emission of fugitive particulate matter from any process, including any material handling or storage activity, that is visible by an observer looking generally overhead at a point beyond the property line of the source unless the wind speed is greater than 40.2 kilometers per hour (25 miles per hour).

ii. 35 IAC 212.321(a), which provides that no person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any new process emission unit which, either alone or in combination with

the emission of particulate matter from all other similar new process emission units, at a source or premises, exceeds the allowable emission rates specified in 35 IAC 212.321(c).

2.2. Non-Applicability Provisions

This permit is issued based on the affected process units not being subject to the New Source Performance Standards (NSPS) for Nonmetallic Mineral Processing Plant, 40 CFR 60 Subpart OOO. This is because the affected facility and the source at which it is located do not crush or grind sand so that they does not constitute a nonmetallic mineral processing plant, as defined by 40 CFR 60.671.

2.3. Emissions

The baghouses for the affected process units shall be designed to emit no more than 0.005 gr/scf for filterable particulate matter, as would be measured by USEPA Method 5.

2.4. Performance Testing

a. i. Within one year of initial startup of the affected fluidized bed dryer, the Permittee shall have performance tests conducted, as follows, by a qualified testing service during conditions that are representative of the maximum emissions.

A. Dryer (purge vent): Emissions of PM, PM_{10}* and VOM

B. Sand Handling Equipment (baghouses): Emissions of PM and PM_{10}*.

* If the Permittee considers all PM emissions to be emissions of filterable PM_{10}, testing for emissions of filterable PM_{10} need not be performed unless specifically requested by the Illinois EPA.

ii. Additional emission testing shall be conducted for unit(s) within 90 days of a written request by the Illinois PA, as specified by the request.

b. The following USEPA methods and procedures shall be used for testing of emissions unless use of another USEPA method is approved by the Illinois EPA as part of its review of the test plan. Refer to 40 CFR 60, Appendix A, for USEPA test methods.

PM	Method 5
PM (condensable)	Method 202
PM_{10} (filterable)	Method 201A
VOM	Method 18 or 25A

2.5. Operational Instrumentation

a. The Permittee shall install, operate and maintain the following instrumentation to measure or indicate the following:

i. For the baghouses for the affected facility, measurement the pressure drop across the baghouses.

ii. For the affected dryer, measurement of either the temperature of the flue gas downstream of the condenser or the temperature of the recovered condensate.

iii. If the flue gas from the dryer is capable of being ducted to a new afterburner, measurement of the temperature of the combustion chamber of this afterburner.

iv. If the flue gas from the dryer is capable of being ducted to the existing afterburner, indication of periods when its emissions are being ducted to the afterburner.

b. The data measured by these instruments shall be recorded at least twice per day. If data is automatically, data measured pursuant to Condition 2.5(a)(i), (ii) and (iii) may be recorded as hourly averages of individual measurements.

2.6 Recordkeeping

a. The Permittee shall keep the records for the amount of sand processed by the affected facility (tons/month and tons/year).

b. The Permittee shall keep the following records related to the emissions of PM and PM_{10} of the affected units controlled by the baghouses:

i. A file containing the design specifications for the baghouses (type of unit, maximum design exhaust flow (acfm and dscfm), filter area, type of filter cleaning), the performance guarantee for particulate exhaust loading in gr/dscf) and the manufacturer’s recommended operating and maintenance procedures for this baghouse.

ii. A file containing calculations for the maximum PM and PM10 emission rates of the baghouses (lbs/hour), with supporting documentation and calculation.

iii. The emissions of PM and PM10 (tons/month and tons/year), with supporting calculations.

c. The Permittee shall keep the following records related to the emissions of VOM, PM and PM_{10} of the affected dryer:

i. A file containing calculations for the maximum hourly emission rate(s) of each pollutant (lbs/hour), with supporting documentation and calculation.

ii. The hours of operation (hours/month and hours/year, by mode of operation, if the dryer has the capability of being ducted to an afterburner).

iii. The emissions of each pollutant (tons/month and tons/year), with supporting calculations.

2.7 Reporting

a. If an afterburner will be installed for the affected dryer or this dryer will be ducted to the existing afterburner at the source, the Permittee shall notify the Illinois EPA at least 30 days prior to commencement of construction of this control measure. This notification shall include a description of the control measure that is planned, the intended manner of operation and the consequences for the natural gas usage and emissions of the affected facility or source.

Section 3: Conditions for the Affected Heater, i.e., the Heater for the Fluidized Bed Sand Dryer

3.1 New Source Performance Standards (NSPS)

a. The affected heater is subject to the NSPS for Small Industrial-Commercial-Institutional Steam Generating Units, 40 CFR 60 Subpart Dc. For the affected heater, the Permittee must comply with applicable requirements of this NSPS and applicable requirements of 40 CFR 60 Subpart A, General Provisions.

b. Pursuant to the NSPS, 40 CFR 60.11(d), the Permittee shall at all times, maintain and operate the affected heater in a manner consistent with good air pollution control practice for minimizing emissions.

3.2 National Emission Standards for Hazardous Air Pollutants (NESHAP)

a. The affected heater is subject to the NESHAP for Major Source for Industrial, Commercial and Institutional Boilers, 40 CFR 63 Subpart DDDDD. For the affected heater, the Permittee must comply with applicable requirements of this NESHAP, including the following, and applicable requirements of 40 CFR 63 Subpart A, General Provisions (see 40 CFR 63.11235 and Table 8 of 40 CFR 63 Subpart DDDDD for specific applicable general provisions). For this purpose, the affected heater is considered to be a unit in the “Unit designed to burn liquid subcategory” beginning on the date that liquid fuel is first burned in the affected heater.

b. As a unit designed to burn liquid, at all times, except for periods that meet the definitions of startup and shutdown in 40 CFR 63.7575, the emissions from this heater shall not exceed the following limits pursuant to the NESHAP, 40 CFR 63.7500(a)(1), on and after the date the applicable performance test required to be conducted under 40 CFR 63.7 is or should be completed. Compliance with these limits shall be demonstrated in accordance with the applicable provisions of this NESHAP, including 40 CFR 63.7500, 63.7505, 63.7510 and 63.7540.

i. Particulate HAP

A. Combustion of distillate oil, either:

PM (filterable): 0.0011 lb/mmBtu; or alternatively
Total Selected Metals: 0.000029 lb/mmBtu

B. Combustion of recovered petroleum distillate, either:

PM (filterable): 0.013 lb/mmBtu; or alternatively
Total Selected Metals: 0.000075 lb/mmBtu.

ii. CO: 130 ppmv, dry, corrected to 3% oxygen, 3-run average

iii. Hydrogen chloride (HCl): 0.00044 lb/mmBtu

iv. Mercury: 0.00000048 lb/mmBtu

c. Pursuant to 40 CFR 63.7500(a)(1) and Table 3 of 40 CFR 63 Subpart DDDDD, the Permittee shall comply with applicable work practice standard of this NESHAP, including

i. Unless the Permittee operates a continuous oxygen trim system on the affected heater, completing periodic tune-ups of the heater at least annually or every 5 years, as applicable, in accordance with 40 CFR 63.7540(a)(10), (12) and (13).

ii. Operating all continuous monitoring systems required by this NESHAP at all times the affected heater is in operation, including during startup of the heater.

iii. Use natural gas or other clean fuel for startup of the affected heater.

d. Pursuant to 40 CFR 63.7500(a)(3), at all times the Permittee must operate and maintain the affected heater, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions

3.3 Applicable State Emission Standards

a. Pursuant to 35 IAC 216.121, the CO emissions of the affected heater shall not exceed 200 ppm, corrected to 50 percent excess air.

b. When liquid fuel is burned in the affected heater, the emissions from the combustion of such fuel shall comply with the following limits:

Pollutant	Rule	Limit
PM	35 IAC 212.206	0.10 lbs/mmBtu
SO_2	35 IAC 214.122(b)(2)	0.3 lb/mmBtu

3.4. Non-Applicability Provisions

a. This permit is issued based on the affected heater not being an incinerator because petroleum distillate recovered from the dryer would only be used as a fuel in this heater if this material does not qualify as a waste under federal and state laws and rules.

b. i. This permit does not address the standards of the NSPS for SO_2 emissions because the affected heater is not subject to such standards as low-sulfur oil that meets the criteria in

40 CFR 60.43c(e)(4) and 63.11210(e) must be used in this heater. (See Condition 3.5(b)(ii).)

ii. The affected heater is not subject to standards of the NSPS for PM and opacity (see 40 CFR 60.43c(c)) because the rated heat input capacity of the affected heater is less than 30 mmBtu/hour.

c. This permit is issued based on the affected heater not being subject to the NESHAP limit for particulate HAP for a unit firing light liquid when petroleum distillate recovered from the dryer is burned. This is because this recovered material does not meet the definition of “distillate oil,” so does not qualify as “light liquid,” and the heater would be a “unit designed to burn heavy liquid,” with all these terms as defined by 40 CFR 63.7575.

3.5. Operational Limits

a. The heat input capacity of the affected heater shall not exceed 28 mmBtu/hour.

b. i. Natural gas and distillate fuel oil may be used as fuels in the affected heater.

ii. A. Petroleum distillate material recovered from the affected dryer shall only be used in the affected heater if, following any necessary sampling and analysis of this material, it is determined that this material when fired in the affected heater would not be a waste under both applicable federal laws and rules and applicable Illinois laws and rules.

B. Prior to initially using petroleum distillate material recovered from the affected dryer as fuel in the affected heater, the Permittee shall submit the following to the Illinois EPA, Bureau of Air. Thereafter, the use of this material in the affected heater shall be consistent with any qualifications and conditions expressed in the determinations or certification submitted to the Illinois EPA.

1. With respect to federal laws and rules, either a copy of a determination by USEPA that this material would not be considered a waste under applicable federal laws and rules when fired in the affected heater or a copy of a certification by the Permittee, with supporting demonstration, that relevant provisions of federal rules (e.g., 40 CFR 241.3(b) and (d)) will be met so that the material would not be considered a waste; and

2. With respect to Illinois laws and rules, a copy of a determination made by either the Illinois EPA, Bureau of Land, or Illinois' Pollution Control Board that this material would not be considered a waste under applicable state laws and rules when fired in the affected heater.

c. The liquid fuel fired in the affected heater shall meet the specifications for sulfur content in 40 CFR 60.43c(e)(4).

d. Pursuant to 40 CFR 63.7500 and Tables 4 and 7 of 40 CFR 63 Subpart DDDDD, beginning on the date that the affected heater first operates as a unit designed to burn liquid, the Permittee shall, as applicable, operate the affected heater to comply with the applicable operating limits established pursuant to this NESHAP, including the following:

i. If the Permittee elects to demonstrate compliance with the applicable limit of this NESHAP for mercury, total selected metals and/or hydrogen chloride by fuel analysis, the Permittee shall maintain the fuel type or fuel mixture such that the applicable emission rate(s) calculated according to 40 CFR 63.7530(c)(1), (2) and/or (3), respectively, as applicable, are less than the applicable emission limit(s).

ii. If the Permittee elects to demonstrate compliance with an applicable limit of this NESHAP by performance testing, the operating load of the affected heater, as monitored in accordance with Table 8 of this NESHAP, shall not exceed 110 percent of the highest hourly average operating load recorded during the most recent performance test.

iii. If the Permittee elects to demonstrate compliance with the CO emission limit with an O_2 analyzer system, as provided for by 40 CFR 63.7525(a), the 30-day rolling average oxygen content shall be maintained at or above the lowest hourly average oxygen concentration measured during the most recent CO performance test, as monitored in accordance with Table 8 of this NESHAP, provided, however, that this requirement will not apply if an oxygen trim system is installed and operated in accordance with 40 CFR 63.7525(a).

3.6. Performance Testing

a. Pursuant to the NSPS, 40 CFR 60 Subpart Dc, the Permittee shall conduct an initial performance test related to the SO_2 emissions of the affected heater pursuant to 40 CFR 60.44c(g) (fuel sampling and analysis) or 40 CFR 60.44c(h) (fuel supplier certification).

b. Pursuant to the NESHAP, 40 CFR 63 Subpart DDDDD, the Permittee shall conduct performance tests for the CO emissions of the affected heater, including initial tests pursuant to 40 CFR 63.7510(c) and periodic tests pursuant to 40 CFR 63.7515, with such tests conducted in accordance with applicable requirements of 40 CFR 63.7520, including development of a site-specific stack test plant according to 40 CFR 63.7520(a).

Note: This condition does not address stack testing under the NESHAP for emissions of mercury, hydrogen chloride or particulate HAP. This because it is expected that the Permittee will elect to comply with the NESHAP limits for these pollutants by fuel analysis, as addressed in Condition 3.7.

c. If the affected heater burns recovered petroleum distillate from the dryer, the Permittee shall also have performance tests conducted, as follows, by a qualified testing service for the affected heater during conditions that are representative of the maximum emissions.

i. Within one year of first burning recovered petroleum distillate in the heater, the Permittee shall have performance tests conducted for emissions of filterable PM*, condensable PM, filterable PM_{10}**, NO_x and CO while burning such material.

* If testing for emissions of filterable PM is conducted pursuant to the NESHAP, separate testing for PM emissions is not required pursuant to this condition.

** If the Permittee considers the results of testing for filterable PM emissions to also represent emissions of filterable PM_{10}, testing for emissions of filterable PM_{10} need not be conducted unless specifically requested by the Illinois EPA.

ii. Additional emission testing shall be conducted for the heater within 90 days of a written request by the Illinois EPA for fuel(s) and pollutants as specified by the request.

b. The following USEPA methods and procedures shall be used for testing of emissions unless use of another USEPA method is approved by the Illinois EPA as part of its review of the test plan. Refer to 40 CFR 60, Appendix A, for USEPA test methods.

PM (filterable)	Method 5
PM (condensable)	Method 202
PM_{10} (filterable)	Method 201A
NO_x	Method 19

3.7 Fuel Analysis Requirements

a. If for the liquid fuel burned in the affected heater, the Permittee elects to comply with the applicable limits of 40 CFR 63 Subpart DDDDD for mercury, hydrogen chloride or total selected metals through fuel analysis, as provided for by 40 CFR 63.7505, the Permittee shall comply with the applicable requirements of this NESHAP for initial and periodic fuel analysis, including 40 CFR 63.7510(b), 63.7515(e) and 63.7521 and Tables 6 and 8 to this NESHAP, with sampling conducted in accordance with a site-specific fuel monitoring plan developed according to 40 CFR 63.7521(b).

b. For distillate oil fuel burned in the affected heater, if the Permittee does not demonstrate compliance with the requirement of Condition 3.5(c) by supplier certification in accordance with 40 CFR 60.48c(e)(11) and (f)(1), the Permittee shall also conduct sampling and analysis of this fuel in accordance with 40 CFR 60.46c(d).

c. The Permittee shall conduct sampling and analysis of the recovered petroleum distillate burned in the affected heater for its sulfur content in accordance with 40 CFR 60.46c(d).

3.8 Monitoring Requirements

Pursuant to 40 CFR 63.7540 and Table 8 of 40 CFR 63 Subpart DDDDD, beginning on the date that the affected heater first operates as a unit designed to burn liquid, the Permittee shall comply with applicable monitoring requirements of 40 CFR 63 Subpart DDDDD. In particular, as the affected heater is subject to operating parameter limits pursuant to this NESHAP (see Condition 3.5(d)), for the affected heater, the Permittee shall:

a. Develop a site-specific monitoring plan in accordance with 40 CFR 63.7505(d).

b. Pursuant to 40 CFR 63.7535, conduct monitoring according to the site-specific monitoring plan for the parameters for which there are operating parameter limits.

3.9 Recordkeeping Requirements

a. For the affected heater, the Permittee shall comply with applicable recordkeeping requirements of the NSPS, 40 CFR 60 Subparts A and Dc, including keeping the following records:

i. The records specified by 40 CFR 60.7(b).

ii. The records related to the sulfur content of liquid fuel specified by 60.48c(e) and (f).

iii. The records for the amount of fuel burned specified by 60.48c(g).

b. For the affected heater, the Permittee shall comply with applicable recordkeeping requirements of the NESHAP, 40 CFR 63 Subparts A and DDDDD, including keeping the following records, with all required records kept in accordance with 40 CFR 63.7560:

i. The records specified by 40 CFR 63.7540(a)(2), (3), (5) and (17) for the fuels burned in the affected heater.

ii. The applicable records specified by 40 CFR 63.7555.

c. The Permittee shall keep a file containing the rated heat input capacity of the affected heater (mmBtu/hour), with supporting documentation.

d. The Permittee shall keep records of the following information related to the operation of the affected heater and its emissions of NO_x, CO, PM, PM_{10} and GHG, as CO_2e.

i. A file containing the following information, with supporting documentation.

A. Calculations for the maximum hourly emission rates of each pollutants (lbs/mmBtu and lbs/hour);

B. The heat content of each fuel that is burned (Btu/scf for natural gas and Btu/gallon for liquid fuel).

ii. The usage of each fuel (mmscf/month and mmscf/year for natural gas and gallons/month and gallons/year for distillate fuel oil and recovered petroleum distillate).

iii. The emissions of each pollutant (tons/month and tons/year), with supporting calculations.

3.9. Reporting Requirement

a. For the affected heater, the Permittee shall comply with applicable reporting requirements of the NSPS, 40 CFR 60 Subparts A and Dc, including submittal of the following notification and reports to the Illinois EPA:

i. The notifications specified by 40 CFR 60.7(a) and 60.48c(a).

ii. Submittal of data of performance test for SO2 emissions and other information related to the sulfur content of liquid fuel as specified by accordance with 40 CFR 60.48c(b), (d) and (e).

b. For the affected heater, the Permittee shall comply with applicable reporting requirements of the NESHAP, 40 CFR 63 Subparts A and DDDDD, including the following notification and reports to the Illinois EPA:

i. Initial notification, as provided for by 40 CFR 63.9(b)(5).

ii. Submittal of periodic compliance reports, as provided for by 40 CFR 63.7550 and Table 9 to 40 CFR 63 Subpart DDDDD.

It should be noted that this revised permit addresses installation of additional equipment as part of the initial construction of the affected facility. The additional equipment would handle raw sand and finished product and will enable the affected facility to operate independently of the existing sand coating facility. Accordingly, this revised permit, in addition to addressing this additional equipment, now allows for simultaneous operation of the both the existing sand coating facility and the affected facility.

If you have any questions on this permit, please call Shashi Shah at 217/785-1705.

Raymond E. Pilapil Date Signed: _____
Acting Manager, Permit Section
Division of Air Pollution Control

REP:SRS:psj

cc: Illinois EPA - FOS, Region 2
CAAPP Permit File 099804AAB

TABLES:

Table 1: Listing of Affected Units Controlled by Baghouse BH1-TW2

Affected Unit(s)
Feed hopper (HP1-TW2)
Waste hopper (HP3-TW2)
Belt conveyors (BC2-TW2, BC3-TW2, BC6-TW2, BC7-TW2, BC8-TW2, BC9-TW2)
Raw material storage silos & drop points (SS1-TW2, SS2-TW2, SS3-TW2 & SS4-TW2)
Bucket elevators (EL1-TW2, EL2-TW2 & EL7-TW2)
Sand heater (HT1-TW2)

Table 2: Listing of Affected Units Controlled by Cyclone CY1-TW2

Affected Unit(s)
Mixers (MX1-TW2 & MX2-TW2)
Fluidized bed dryer (DR1-TW2)
Belt Conveyor (BC4-TW2)
Material transfer units (TU1-TW2, TU2-TW2 & TU3-TW2)
Bucket elevator (EL4-TW2)
Hoppers (HP4-TW2 & HP6-TW2)
Sand coolers (CO1-TW2 & CO2-TW2)

Table 3: Listing of Affected Units Controlled by Baghouse BH2-TW2

Affected Unit(s)
Material Transfer Unit (TU4-TW2)
Bucket Elevator (EL6-TW2)
Raw storage silos (SS5-TW2, SS6-TW2, SS7-TW2 & SS8-TW2)
Conveyors (BC10-TW2 & BC11-TW2)
Bucket elevators (EL3-TW2 & EL5-TW2)
Hoppers (HP2-TW2, HP5-TW2, HP7-TW2 & HP8-TW2)
Screen (SC2-TW2)
Bulk Bagger (BB1-TW2)
Rail loadout spout (SP1-TW2)
Truck loadout spout (SP2-TW2)

Table 4: Limits for PM/PM_{10} Emissions from the Affected Units

Affected Unit(s)	PM/PM_{10} Emissions*	
	Lb/Hr	Ton/Yr
Fluidized Bed Dryer	0.25	1.10
Heater for the Fluidized Bed Dryer	0.25	1.10
Process Units Controlled by Baghouse BH1-TW2, combined (See Table 1)	0.43	1.88
Process Units Controlled by Cyclone CY1-TW2, combined (See Table 2)	2.53	11.1
Process Units Controlled by Baghouse BH2-TW2, combined (See Table 3)	0.43	1.88
Coating Storage Tanks	----	0.44
Space Heaters, combined	----	0.44
Total		17.94

* As limits apply for PM, they address only filterable particulate as would be measured by USEPA Method 5. As limits apply for PM_{10}, they address the sum of filterable PM_{10} and condensable particulate, as would be measured by USEPA Methods 201A and 202, respectively.